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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,542	12/03/2003	Greg L. Cannon	1823.0820006	3187

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STERNE; KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

MARIAM, DANIEL G

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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07/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/725,542

Applicant(s)

CANNON ET AL.

Examiner

DANIEL G. MARIAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-30, 32-34 and 38-41 is/are rejected.
- 7) ☒ Claim(s) 31, 35-37 and 42 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: ____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date
:9/20/06,3/20/06,9/28/05,9/20/04,8/20/04.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 20 is rejected under 35 U.S.C. 112, first paragraph, in that the enabling disclosure is not commensurate in scope with the claim. A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. In re Hyatt, 708 F.2d 712, 714-715, 218 USPQ 195, 197 Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to Hyatt is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor (See MPEP 2164.08(a)).

Since claims 21-22 directly or indirectly depend on claim 1, they are also rejected under 35 U.S.C. 112, first paragraph, for the same reason set forth above for claim 1.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 29 recites the limitation "the interpolation method" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Examiner's Note

4. Examiner has cited particular columns and line numbers or figures in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 20, 23, 26, 32, and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakajima, et al (6,094,499).

With regard to claim 1, a system for processing image data representing biometric data, i.e., fingerprint data, (See for example, Fig. 2), comprising: a receiving module, i.e., item 165 or 166, in Fig. 16, for receiving image data captured in a first coordinate system, i.e., Cartesian coordinate system (See for example, col. 18, lines 41-45); and a coordinate conversion module, i.e., item 167, in Fig. 16, coupled to the receiving module for converting the image data captured

in the first coordinate system to converted image data in a second coordinate system, i.e., polar coordinates system (See for example, col. 18, lines 46-59). Additionally, applicants' attention is invited to the overall system shown in Figure 2.

With regard to claim 2, the system of claim 1 further comprising a memory coupled to the coordinate conversion module (See for example, item 20-5, in Fig. 2).

With regard to claim 20, a system for processing image data representing biometric data, comprising: means for converting image data captured in a first coordinate, i.e., Cartesian, system to converted image data in a second coordinate system, i.e., polar (See for example, col. 18, lines 41-59).

Claim 23 is rejected the same as claim 1 except claim 23 is a method claim. Thus, argument analogous to that presented above for claim 1 is applicable to claim 23.

With regard to claim 26, the method of claim 23, further comprising: generating and storing a conversion data array including coordinate and offset data (See for example, col. 17, lines 52-65).

With regard to claim 32, a method for processing image data representing biometric, i.e., fingerprint, data in a system having a scanning and capturing system (See for example, item 10, in Fig. 2) and an image conversion system (See for example, item 20, in Fig. 2), comprising: generating and storing conversion data in the image conversion system (See for example, item 20-5, in Fig. 2); capturing in the scanning and capturing system the image data in a first coordinate system, i.e., Cartesian (See for example, col. 18, lines 41-45); communicating the captured first coordinate system image data to the image conversion system and converting the

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captured first coordinate system image data to converted image data in a second coordinate system (See for example, col. 18, lines 46-59).

With regard to claim 38, claim 1 encompasses the limitation of this claim, and is rejected the same as claim 1. Thus, argument analogous to that presented above for claim 1 is applicable to claim 38.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5, 9-11, 14-17, 27-28, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima, et al (6,094,499) in view of Maase, et al (5,528,355).

With regard to claim 9, Nakajima, et al (hereinafter "Nakajima") discloses all of the claimed subject matter as already discussed above for claim 1, and the arguments are not repeated herein, but are incorporated by reference. Nakajima also discloses a fingerprint sensor that embeds a generic prism (See for example, item 10-3 in Figure 2). Claim 9 distinguishes from claim 1 only in that it recites a non-planar prism. However, Maase, et al (item 12, in Fig. 1b) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by Maase, et al into the system so as to provide a non-planar platen/prism, and to do so would at least enable the system of Nakajima obtain complete patterns and high quality imaging of the hand, finger or palm print.

With regard to claim 5 (claim 9 encompasses the limitation of this claim), and is rejected the same as claim 9. Thus, argument analogous to that presented above for claim 9 is applicable to claim 5.

With regard to claim 10, the system of claim 9 wherein the image conversion system includes: a receiving module for receiving image data captured in a first coordinate system (See for example, col. 18, lines 41-45 of Nakajima); and a coordinate conversion module coupled to the receiving module for converting the image data captured in the first coordinate system to converted image data in a second coordinate system (See for example, col. 18, lines 46-59 of Nakajima).

With regard to claim 11, the system of claim 10 wherein the image conversion system further comprises a memory coupled to the coordinate conversion module (See for example, item 20-5, in Fig. 2 of Nakajima).

With regard to claim 14, the system of claim 11 wherein the non-planar prism is a conical prism (See for example, col. 3, line 65 – col. 4, line 2 of Maase, et al).

With regard to claim 15, claim 9 encompasses the limitation of this claim, and is rejected the same as claim 9. Thus, argument analogous to that presented above for claim 9 is applicable to claim 9. Claim 15 distinguishes from claim 10 only in that it recites the limitation "a system for processing image data representing biometric data, comprising a biometric, i.e., fingerprint, imaging system," which is also disclosed in Nakajima (See for example, Fig. 2).

With regard to claim 16 is rejected the same as claim 10. Thus, argument analogous to that presented above for claim 10 is applicable to claim 16.

With regard to claim 17, the system of claim 16 wherein the second image conversion system includes: a receiving module for receiving image data captured in a first coordinate system, and a coordinate conversion module coupled to the receiving module for converting the image data captured in the first coordinate system to converted image data in a second coordinate system (See for example, items 167-168, in Fig.16 of Nakajima).

With regard to claim 27, the method of claim 23, further comprising: prior to receiving captured image data, receiving criteria, i.e., ID number, associated with specifications for processing the captured image data, and generating and storing at least conversion data array corresponding to the received criteria (See for example, col. 18, lines 26-59 of Nakajima).

With regard to claim 28, the method of claim 27 further comprising generating and storing at least one conversion parameter, i.e., amplitude or phase, corresponding to the received criteria (See for example, col. 18, lines 41-45 of Nakajima).

With regard to claim 30, the method of claim 27 wherein each of the at least one conversion data array is generated dynamically (See for example, col. 18, lines 26-65 of Nakajima).

9. Claims 3-4, 21-22, 24-25, 33-34 and 39-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima, et al (6,094,499) in view of Berry, et al (4,387,365).

With regard to claim 21, Nakajima, et al (hereinafter "Nakajima") discloses all of the claimed subject matter as discussed above in paragraph 6, and incorporated herein by reference. While Nakajima discloses the second coordinate system as being a polar coordinate system and the first as being a Cartesian or rectangular coordinate system (See the argument presented above for claim 20, which is incorporated herein by reference), Nakajima does not expressly call for

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wherein the second coordinate system is a rectangular coordinate system. However, Berry, et al (See col. 6, lines 53-64) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching as taught by Berry, et al into the system of Nakajima if for no other reason than to have a converter that converts an image data that is presented in a polar coordinate format into a rectangular format.

With regard to claim 22, the system of claim 12 wherein the first coordinate system is a polar coordinate system (See col. 6, lines 53-64 of Berry, et al).

Claims 3 and 4 are rejected the same as claims 21 and 22 respectively. Thus, arguments analogous to those presented above for claims 21 and 22 are respectively applicable to claims 3 and 4.

Claims 24 and 25 are rejected the same as claims 21 and 22 respectively except claims 24 and 25 are method claims. Thus, arguments analogous to those presented above for claims 21 and 22 are respectively applicable to claims 24 and 25.

Claims 33 and 34 are rejected the same as claims 22 and 21 respectively. Thus, arguments analogous to those presented above for claims 22 and 21 are respectively applicable to claims 33 and 34.

Claims 39 and 40 are rejected the same as claims 33 and 34 respectively. Thus, arguments similar to those presented above for claims 33 and 34 are respectively applicable to claims 39 and 40.

With regard to claim 41, the method of claim 40, further comprising: generating and storing conversion data including polar coordinate and polar offset data (See for example, col. 17, lines 52-65 of Nakajima).

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10. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima in view of Berry, et al as applied to claims 3-4, 21-22, 24-25, 33-34 and 39-41 above, and further in view of Martinez, et al (6,483,932).

With regard to claim 6, Nakajima (as modified by Berry, et al) discloses all of the claimed subject matter as already discussed above in paragraph 9, and incorporated herein by reference. While Nakajima (as modified by Berry, et al) discloses the scanning and capturing system coupled to the receiving module via item 20-5 in Fig. 2 "Nakajima", he does not expressly call for wherein the scanning and capturing system is coupled to the receiving module via a data network. However, Martinez, et al (See col. 4, lines 47-62) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to incorporate the teaching as taught by Martinez, et al into the system of Nakajima (as modified by Berry, et al), so as to establish communication between the capturing system and the receiving module using a data network.

11. Claims 7-8, 12-13 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakajima in view of Maase, et al as applied to claims 5, 9-11, 14-17, 27-28, and 30 above, and further in view of Berry, et al (4,387,365).

With regard to claim 12, Nakajima (as modified by Maase, et al) discloses all of the claimed subject matter as discussed above in paragraph 8, and incorporated herein by reference. While Nakajima discloses the second coordinate system as being a polar coordinate system and the first as being a Cartesian or rectangular coordinate system (See the argument presented above for claim 10, which is incorporated herein by reference), Nakajima does not expressly call for wherein the second coordinate system is a rectangular coordinate system. However, Berry, et al

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(See col. 6, lines 53-64) teaches this feature. Therefore, it would have been obvious to one having ordinary skill in the art to employ the teaching as taught by Berry, et al into the system of Nakajima (as modified by Maase, et al) if for no other reason than to have a converter that converts an image data that is presented in a polar coordinate format into a rectangular format.

With regard to claim 13, the system of claim 12 wherein the first coordinate system is a polar coordinate system (See col. 6, lines 53-64 of Berry, et al).

Claims 7 and 8 are rejected the same as claims 12 and 13 respectively. Thus, arguments analogous to those presented above for claims 12 and 13 are respectively applicable to claims 7 and 8.

Claims 18 and 19 are rejected the same as claims 12 and 13 respectively. Thus, arguments analogous to those presented above for claims 12 and 13 are respectively applicable to claims 18 and 19.

Allowable Subject Matter

12. Claims 31, 35-37, and 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

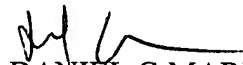
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G. MARIAM whose telephone number is 571-272-7394. The examiner can normally be reached on M-F (7:00-4:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MATTHEW BELLA can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DANIEL G MARIAM
Primary Examiner
Art Unit 2624

July 3, 2007